

Bill Nye – Genes

Date _____

1. What does DNA stand for? _____
2. How long is a DNA molecule? _____
3. Thousands of genes join together to make a _____.
4. Genes are the set of chemical _____ that are passed on from _____ to _____.
5. Where are genes stored? _____
6. Humans have _____ pairs of chromosomes for a total of _____ chromosomes.
7. Humans have approximately _____ genes.
8. Human genes can combine in approximately _____ different combinations.
9. What are the four chemicals that make up the DNA sequence of all living things?
_____, _____, _____, _____
10. Changes in DNA instructions are called _____.

Practice Questions:

- _____ 11. In DNA, the set of instructions that code for a protein is a
A. gene
B. chromosome
C. nucleic acid
D. nucleotide
- _____ 12. The chemical backbone of a DNA strand is made up of alternating phosphate groups and ribose sugar.
A. True
B. False
- _____ 13. How are the two strands of the DNA double helix held together?
A. covalent bonds
B. hydrogen bonds
C. ionic bonds
D. DNA bonds
- _____ 14. Which of the following nucleotide pairings is correct for a DNA strand?
A. cytosine – thymine
B. adenine – guanine
C. thymine – guanine
D. guanine – cytosine
- _____ 15. If a DNA strand is composed of 40% adenine, it would be expected to also have
A. 60% cytosine
B. 40% thymine
C. 60% thymine
D. 40% guanine
- _____ 16. What is the complimentary base sequence for AATCGGTA?
A. CCGTAAGC
B. GGCTAACG
C. TTAGCCAT
D. TTACGGAT